



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/841,774	04/24/2001	Joseph S. Chan	066698.0128	6874
27683	7590	11/17/2004	EXAMINER	
HAYNES AND BOONE, LLP 901 MAIN STREET, SUITE 3100 DALLAS, TX 75202				SHIMIZU, MATSUICHIRO
		ART UNIT		PAPER NUMBER
		2635		

DATE MAILED: 11/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/841,774	CHAN ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Matsuichiro Shimizu	2635	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 24 April 2001.  
 2a) This action is **FINAL**.                            2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1-20 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) 1 and 2 is/are allowed.  
 6) Claim(s) 3,4,6,12,13 and 15 is/are rejected.  
 7) Claim(s) 5,7-11,14 and 16-20 is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on 24 April 2001 is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) Notice of References Cited (PTO-892)  
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)  
 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
 Paper No(s)/Mail Date 12/17/03; 1/17/03; 7/8/02 ; 2/4/02

4) Interview Summary (PTO-413)  
 Paper No(s)/Mail Date. \_\_\_\_\_.  
 5) Notice of Informal Patent Application (PTO-152)  
 6) Other: \_\_\_\_\_.

***Double Patenting***

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claim 12 is rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 13 of *Eagleson et al.* (6,765,484) in view of *Lee et al.* (US 6,539,050).

Regarding claim 12. *US-484* cites a method, comprising the steps of: receiving in a receiver section of a tag wireless signpost signals that each include a signpost code; and transmitting from a transmitter section of said tag wireless beacon signals which each include a beacon code associated with said tag, said transmitting step including the steps of: causing said transmitter section to be responsive to receipt by said receiver section of a respective said signpost signal for including in at least one said beacon signal the signpost code from the received signpost signal in claim 13. But *US-484* does not teach said transmitter section is responsive to receipt by said

receiver section of one of said signpost signals for automatically effecting variation in a predetermined manner of at least one of a transmission power level and a transmission rate for said beacon signals.

However, Lee teaches, in the art of transmission system, said transmitter section is responsive to receipt by said receiver section of one of said signpost signals for automatically effecting variation in a predetermined manner of at least one of a transmission power level and a transmission rate for said beacon signals (Fig. 7, automatically decrease power 194 and increase data rate 196 while error rate is below predetermined rate 190) for the purpose of providing optimum transmission. Therefore, it would have been obvious to a person skilled in the art at the time the invention was made to include said transmitter section is responsive to receipt by said receiver section of one of said signpost signals for automatically effecting variation in a predetermined manner of at least one of a transmission power level and a transmission rate for said beacon signals in the device of US-484 because US-484 suggests said transmitter section to be responsive to receipt by said receiver section of a respective said signpost signal for including in at least one said beacon signal the signpost code from the received signpost signal in claim 13 and Lee teaches said transmitter section is responsive to receipt by said receiver section of one of said signpost signals for automatically effecting variation in a predetermined manner of at least one of a transmission power level and a transmission rate for said beacon signals for the purpose of providing optimum transmission.

*Claim Rejections – 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claim 3–4, 6,12–13 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sharpe et al. (5,49,079) in view of Lee et al. (6,539,050).

Regarding claims 3 and 12, Sharpe teaches an apparatus comprising a tag (Fig. 2, toll tag 24) having circuitry which includes: a receiver section (Fig. 2, signpost sensor 36) operable to receive wireless signpost signals that each include a signpost code (col. 4, lines 1–3, signpost code); and a transmitter section operable to transmit wireless beacon signals (col. 3, lines 27–34, activating transmitter 38 to send signal associated with tag and signpost) which each include a beacon code associated with said tag, said transmitter section being responsive to receipt by said receiver section of a respective said signpost signal for including in at least one said beacon signal the signpost code from the received signpost signal. But Sharpe does not teach said transmitter section is responsive to receipt by said receiver section of one of said

signpost signals for automatically effecting variation in a predetermined manner of at least one of a transmission power level and a transmission rate for said beacon signals.

However, Lee teaches, in the art of transmission system, said transmitter section is responsive to receipt by said receiver section of one of said signpost signals for automatically effecting variation in a predetermined manner of at least one of a transmission power level and a transmission rate for said beacon signals (Fig. 7, automatically decrease power 194 and increase data rate 196 while error rate is below predetermined rate 190) for the purpose of providing optimum transmission.

Therefore, it would have been obvious to a person skilled in the art at the time the invention was made to include said transmitter section is responsive to receipt by said receiver section of one of said signpost signals for automatically effecting variation in a predetermined manner of at least one of a transmission power level and a transmission rate for said beacon signals in the device of Sharpe because Sharpe suggests detector receiving the reflected component and Lee teaches said transmitter section is responsive to receipt by said receiver section of one of said signpost signals for automatically effecting variation in a predetermined manner of at least one of a transmission power level and a transmission rate for said beacon signals for the purpose of providing optimum transmission.

Regarding claims 4 and 13, Lee teaches an apparatus according to claims 3 and 12, wherein said transmitter section is operative to carry out said variation by: transmitting a first series of said beacon signals containing the signpost code at a first transmission power level; and thereafter transmitting a second series of said beacon signals containing the signpost code at a second transmission power level which is higher than said first transmission power level, said first series being transmitted at a

effective first rate (Fig. 7, automatically decrease power 194 and increase data rate 196 while error rate is below first predetermined rate 190) which is substantially higher than an effective second rate at which said second series is transmitted (Fig. 7, automatically decrease power 194 and increase data rate 196 while error rate is below second predetermined rate 190).

Regarding claims 6 and 15, Sharpe in view of Lee does not teach an apparatus according to claims 4 and 13, wherein said first rate is at least ten times said second rate.

However, Lee discloses, in the art of transmission system, said transmitter section is responsive to receipt by said receiver section of one of said signpost signals for automatically effecting variation in a predetermined manner of at least one of a transmission power level and a transmission rate for said beacon signals (Fig. 7, automatically decrease power 194 and increase data rate 196 while error rate is below predetermined rate 190) for the purpose of providing optimum transmission.

Therefore, it would have been obvious to a person skilled in the art at the time of invention was made to include said first rate is at least ten times said second rate as a matter of choice in design because Lee suggests said transmitter section is responsive to receipt by said receiver section of one of said signpost signals for automatically effecting variation in a predetermined manner of at least one of a transmission power level and a transmission rate for said beacon signals and one skilled in the art recognizes said first rate is at least ten times said second rate is a matter of choice in design through routine experimentation in order to achieve optimum transmission operation.

***Allowable Subject Matter***

Regarding claim 1, the prior arts fail to teach or fairly suggest said transmitter section is operable to transmit said beacon signals in a selected one of first and second formats which are different, said transmitter section using said first format in response to receipt of one of said signpost signals and using said second format in response to the absence of receipt of any of said signpost signals for a specified time interval, said first format including a signpost field containing the signpost code from the most recently received signpost signal, and said second format lacking said signpost field and being shorter in length than said first format.

Regarding claim 2, the prior arts fail to teach or fairly suggest transmitting from a transmitter section of said tag wireless beacon signals which each include a beacon code associated with said tag, said transmitting step including the steps of: causing said transmitter section to transmit said beacon signals in a selected one of first and second formats which are different, said transmitter section using said first format in response to receipt of one of said signpost signals and using said second format in response to the absence of receipt of any of said signpost signals for a specified time interval, said first format including a signpost field containing the signpost code from the most recently received signpost signal, and said second format lacking said signpost field and being shorter in length than said first format.

Claims 5, 7-11, 14 and 16-20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claims 5 and 14, the prior arts fail to teach or fairly suggest said transmission of said second series is carried out by defining a plurality of successive

second time slots and transmitting each of said beacon signals of said second series at a substantially randomly selected time within a respective said second time slot, said second time slots being substantially longer than said first time slots.

Regarding claims 7 and 16, the prior arts fail to teach or fairly suggest said transmitter section is further operative to carry out said variation by inhibiting transmission of said beacon signals during a time interval which occurs between transmission of said first and second series.

Regarding claims 8 and 17, the prior arts fail to teach or fairly suggest said transmitter section is further operative to carry out said variation by transmitting, after said first series and before said second series, a third series of said beacon signals containing the signpost code at said first transmission power level and at an effective third rate which is less than said first rate and greater than said second rate.

Claims 9-11 and 18-20 are directly/ or indirectly dependent on claim 8 and 17, therefore, the prior arts fail to teach or fairly suggest claims 9-11 and 18-20 for same reason that the prior arts fail to teach or fairly suggest claims 8 and 17.

#### *Contact Information*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matsuichiro Shimizu whose telephone number is (571-272-3066). The examiner can normally be reached on Monday through Friday from 8:00 AM to 4:30 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Horabik, can be reached on (571-272-3068). The fax phone number for the organization where this application or proceeding is assigned is (703-305-3988).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703-305-8576).

Matsuichiro Shimizu  
November 10, 2004

MICHAEL HORABIK  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600

